RAW SEQUENCE LISTING   DATE: 01/24/2002
PATENT APPLICATION: US/09/890,752A   TIME: 13:37:59

Input Set : A:\107070-120.ST25.txt
Output Set: N:\CRF3\01242002\I890752A.raw

```
 4 <110> APPLICANT: Hildt, Eberhard
 5         Hofschneider, Peter
 7 <120> TITLE OF INVENTION: Particles for Gene Therapy
 9 <130> FILE REFERENCE: 107070-120 (VOS-013)
11 <140> CURRENT APPLICATION NUMBER: US 09/890,752A
12 <141> CURRENT FILING DATE: 2001-08-03
14 <150> PRIOR APPLICATION NUMBER: PCT/DE00/00363
15 <151> PRIOR FILING DATE: 2000-02-04
17 <150> PRIOR APPLICATION NUMBER: DE 199 04 800.2
18 <151> PRIOR FILING DATE: 1999-02-05
20 <160> NUMBER OF SEQ ID NOS: 21
22 <170> SOFTWARE: PatentIn version 3.1
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 347
26 <212> TYPE: PRT
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Fusion protein comprising a LHBs and heterologous binding
31        site RGD
33 <400> SEQUENCE: 1
35 Met Gly Arg Gly Asp Gly Ala Gly Ala Phe Gly Leu Gly Phe Thr Pro
36 1               5                   10                  15
38 Pro His Gly Gly Leu Leu Gly Trp Ser Pro Gln Ala Gln Gly Ile Leu
39             20                  25                  30
41 Glu Thr Leu Pro Ala Asn Pro Pro Ala Ser Thr Asn Arg Gln Ser
42         35                  40                  45
44 Gly Arg Gln Pro Thr Pro Leu Ser Pro Pro Leu Arg Asn Thr His Pro
45         50                  55                  60
47 Gln Ala Met Gln Trp Asn Ser Thr Thr Phe His Gln Thr Leu Gln Asp
48 65                  70                  75                  80
50 Pro Arg Val Arg Gly Leu Tyr Phe Pro Ala Gly Gly Ser Ser Ser Gly
51                 85                  90                  95
53 Thr Val Asn Pro Val Pro Thr Thr Val Ser Pro Ile Ser Ser Ile Phe
54             100                 105                 110
56 Ser Arg Ile Gly Asp Pro Ala Leu Asn Met Glu Asn Ile Thr Ser Gly
57         115                 120                 125
59 Phe Leu Gly Pro Leu Leu Val Leu Gln Ala Gly Phe Phe Leu Leu Thr
60         130                 135                 140
62 Arg Ile Leu Thr Ile Pro Gln Ser Leu Asp Ser Trp Trp Thr Ser Leu
63 145                 150                 155                 160
65 Asn Phe Leu Gly Gly Thr Thr Val Cys Leu Gly Gln Asn Ser Gln Ser
66             165                 170                 175
68 Pro Thr Ser Asn His Ser Pro Thr Ser Cys Pro Pro Thr Cys Pro Gly
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Input Set : A:\107070-120.ST25.txt
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```
69               180                185                190
71 Tyr Arg Trp Met Cys Leu Arg Arg Phe Ile Ile Phe Leu Phe Ile Leu
72        195                200                205
74 Leu Leu Cys Leu Ile Phe Leu Leu Val Leu Leu Asp Tyr Gln Gly Met
75        210                215                220
77 Leu Pro Val Cys Pro Leu Ile Pro Gly Ser Ser Thr Thr Ser Thr Gly
78 225                230                235                240
80 Pro Cys Arg Thr Cys Thr Thr Pro Ala Gln Gly Thr Ser Met Tyr Pro
81            245                250                255
83 Ser Cys Cys Cys Thr Lys Pro Ser Asp Gly Asn Cys Thr Cys Ile Pro
84            260                265                270
86 Ile Pro Ser Ser Trp Ala Phe Gly Lys Phe Leu Trp Glu Trp Ala Ser
87        275                280                285
89 Ala Arg Phe Ser Trp Leu Ser Leu Leu Val Pro Phe Val Gln Trp Phe
90        290                295                300
92 Val Gly Leu Ser Pro Thr Val Trp Leu Ser Val Ile Trp Met Met Trp
93 305                310                315                320
95 Tyr Trp Gly Pro Ser Leu Tyr Ser Ile Leu Ser Pro Phe Leu Pro Leu
96                325                330                335
98 Leu Pro Ile Phe Phe Cys Leu Trp Val Tyr Ile
99            340                345
103 <210> SEQ ID NO: 2
104 <211> LENGTH: 215
105 <212> TYPE: PRT
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Fusion protein comprising a HBcAg, a cell-permeability-
110        mediating polypeptide and heterologous binding site RGD
113 <400> SEQUENCE: 2
115 Met Pro Leu Ser Ser Ile Phe Ser Arg Ile Gly Asp Pro Thr Val Gln
116 1                5                10                15
118 Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile Asp Pro
119            20                25                30
121 Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu Pro Ser
122        35                40                45
124 Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser Ala Leu
125        50                55                60
127 Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His His Thr
128 65                70                75                80
130 Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr Leu Ala
131            85                90                95
133 Thr Trp Val Gly Val Asn Leu Glu Asp Pro Glu Phe Arg Gly Asp Ala
134            100                105                110
136 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
137        115                120                125
139 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
140        130                135                140
142 Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
143 145                150                155                160
```

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Input Set : A:\107070-120.ST25.txt
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```
145 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
146                 165                 170                 175
148 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
149                 180                 185                 190
151 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
152             195                 200                 205
154 Gln Ser Arg Glu Pro Gln Cys
155     210                 215
160 <210> SEQ ID NO: 3
161 <211> LENGTH: 663
162 <212> TYPE: DNA
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: DNA coding for a fusion protein comprising a HBcAg, a
167       cell-permeability-mediating polypeptide and heterologous
168       binding site RGD
170 <400> SEQUENCE: 3
171 atgcccatat cgtcaatctt ctcgaggatt ggggaccctg gatccactac tgttcaagcc    60
173 tccaagctgt gccttgggtg gctttggggc atggacatcg acccttataa agaatttgga   120
175 gctactgtgg agttactctc gtttttgcct tctgacttct ttccttcagt acgagatctt   180
177 ctagataccg cctcagctct gtatcgggaa gccttagagt ctcctgagca ttgttcacct   240
179 caccatactg cactcaggca agcaattctt tgctgggggg aactaatgac tctagctacc   300
181 tgggtgggtg ttaatttgga agatccagaa ttccgaggcg acgcgtctag agacctagta   360
183 gtcagttatg tcaacactaa tatgggccta aagttcaggc aactcttgtg gtttcacatt   420
185 tcttgtctca cttttggaag agaaaccgtt atagagtatt tggtgtcttt cggagtgtgg   480
187 attcgcactc ctccagctta tagaccacca aatgcccta tcctatcaac acttccggaa     540
189 actactgttg ttagacgacg aggcaggtcc cctagaagaa gaactccctc gcctcgcaga   600
191 cgaaggtctc aatcgccgcg tcgcagaaga tctcaatctc gggaacctca atgttagtat   660
193 tcc                                                                 663
197 <210> SEQ ID NO: 4
198 <211> LENGTH: 1047
199 <212> TYPE: DNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: DNA coding for a fusion protein comprising a LHBs and
204       heterologous binding site RGD
206 <400> SEQUENCE: 4
207 atgggccgtg gcgaaggagc tggagcattc gggctgggtt tcacccccacc gcacggaggc    60
209 ctttttgggggt ggagccctca ggctcaggggc atactacaaa ctttgccagc aaatccgcct  120
211 cctgcctcca ccaatcgcca gacaggaagg cagcctaccc cgctgtctcc acctttgaga   180
213 aacactcatc ctcaggccat gcagtggaat tccacaacct ttcaccaaac tctgcaagat   240
215 cccagagtga gaggcctgta tttccctgct ggtggctcca gttcaggagc agtaaaccct   300
217 gttccgacta ctgcctctcc cttatcgtca atcttctcga ggattgggga ccctgcgctg   360
219 aacatggaga acatcacatc aggattccta ggaccccttc tcgtgttaca ggcggggttt   420
221 ttcttgttga caagaatcct cacaataccg cagagtctag actcgtggtg gacttctctc   480
223 aattttctag ggggaactac cgtgtgtctt ggccaaaatt cgcagtcccc aacctccaat   540
225 cactcaccaa cctcctgtcc tccaacttgt cctggttatc gctggatgtg tctgcggcgt   600
227 tttatcatct tcctcttcat cctgctgcta tgcctcatct tcttgttggt tcttctggac   660
229 tatcaaggta tgttgcccgt ttgtcctcta attccaggat cctcaaccac cagcacggga   720
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Input Set : A:\107070-120.ST25.txt
Output Set: N:\CRF3\01242002\I890752A.raw

```
231 ccatgccgaa cctgcatgac tactgctcaa ggaacctcta tgtatccctc ctgttgctgt       780
233 accaaacctt cggacggaaa ttgcacctgt attcccatcc catcatcctg ggctttcgga       840
235 aaattcctat gggagtgggc ctcagcccgt ttctcctggc tcagtttact agtgccattt       900
237 gttcagtggt tcgtagggct ttcccccact gtttggcttt cagttatatg gatgatgtgg       960
239 tattgggggc caagtctgta cagcatcttg agtccctttt taccgctgtt accaattttc      1020
241 ttttgtcttt gggtatacat ttaaacc                                          1047
244 <210> SEQ ID NO: 5
245 <211> LENGTH: 35
246 <212> TYPE: DNA
247 <213> ORGANISM: Artificial Sequence
249 <220> FEATURE:
250 <223> OTHER INFORMATION: Primer
252 <400> SEQUENCE: 5
253 ccatattctt gggaacaaga tatccagcac ggggc                                    35
256 <210> SEQ ID NO: 6
257 <211> LENGTH: 33
258 <212> TYPE: DNA
259 <213> ORGANISM: Artificial Sequence
261 <220> FEATURE:
262 <223> OTHER INFORMATION: Primer
264 <400> SEQUENCE: 6
265 ggattgctgg tggaagatat ctgccccgtg ctg                                      33
269 <210> SEQ ID NO: 7
270 <211> LENGTH: 33
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Primer
277 <400> SEQUENCE: 7
278 cagcacgggg cagatatctt ccaccagcaa tcc                                      33
281 <210> SEQ ID NO: 8
282 <211> LENGTH: 38
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial Sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Primer
289 <400> SEQUENCE: 8
290 gccccgtgct ggatatcatc ttgttcccaa gaatatgg                                 38
293 <210> SEQ ID NO: 9
294 <211> LENGTH: 36
295 <212> TYPE: DNA
296 <213> ORGANISM: Artificial Sequence
298 <220> FEATURE:
299 <223> OTHER INFORMATION: Primer
301 <400> SEQUENCE: 9
302 aaaagatctg gccgtggcga aggagctgga gcattc                                   36
305 <210> SEQ ID NO: 10
306 <211> LENGTH: 30
307 <212> TYPE: DNA
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RAW SEQUENCE LISTING   DATE: 01/24/2002
PATENT APPLICATION: US/09/890,752A   TIME: 13:37:59

Input Set : A:\107070-120.ST25.txt
Output Set: N:\CRF3\01242002\I890752A.raw

```
308 <213> ORGANISM: Artificial Sequence
310 <220> FEATURE:
311 <223> OTHER INFORMATION: Primer
313 <400> SEQUENCE: 10
314 aaaagatctg gtttaaatgt atacccaaag                              30
317 <210> SEQ ID NO: 11
318 <211> LENGTH: 33
319 <212> TYPE: DNA
320 <213> ORGANISM: Artificial Sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: Primer
325 <400> SEQUENCE: 11
326 cccgatatca tgtcatctct tgttcatgtc cta                          33
329 <210> SEQ ID NO: 12
330 <211> LENGTH: 30
331 <212> TYPE: DNA
332 <213> ORGANISM: Artificial Sequence
334 <220> FEATURE:
335 <223> OTHER INFORMATION: Primer
337 <400> SEQUENCE: 12
338 ggggatatcg gtcgatgtcc atgccccaaa                              30
341 <210> SEQ ID NO: 13
342 <211> LENGTH: 36
343 <212> TYPE: DNA
344 <213> ORGANISM: Artificial Sequence
346 <220> FEATURE:
347 <223> OTHER INFORMATION: Primer
349 <400> SEQUENCE: 13
350 gggggatccc gatgtacggg ccagatatac gcgttg                       36
353 <210> SEQ ID NO: 14
354 <211> LENGTH: 27
355 <212> TYPE: DNA
356 <213> ORGANISM: Artificial Sequence
359 <220> FEATURE:
360 <223> OTHER INFORMATION: Primer
362 <400> SEQUENCE: 14
363 gggggatccg cggccgcttt acttgta                                 27
366 <210> SEQ ID NO: 15
367 <211> LENGTH: 57
368 <212> TYPE: DNA
369 <213> ORGANISM: Artificial Sequence
371 <220> FEATURE:
372 <223> OTHER INFORMATION: Primer
374 <220> FEATURE:
375 <221> NAME/KEY: misc_feature
376 <222> LOCATION: (1)..(57)
377 <223> OTHER INFORMATION: Nucleotides 1-3 and 55-57 are "n" wherein "n" = any
nucleotide.
379 <400> SEQUENCE: 15
380 nnnagatcta tgcccatatc gtcaatcttc tcgaggattg gggaccctgg atccnnn   57
```

Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

VERIFICATION SUMMARY   DATE: 01/24/2002
PATENT APPLICATION: US/09/890,752A   TIME: 13:38:00

Input Set : A:\107070-120.ST25.txt
Output Set: N:\CRF3\01242002\I890752A.raw

```
L:380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:449 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
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